

REMARKS

This is in response to the Official Action mailed on June 6, 2007.

In the Official Action, there was a provisional double patenting rejection in claims 1-19 as being unpatentable over claims 1, 2-7, 10, 12, 13, 15-22 and 30 and 31 of co-pending application no. 10/447,503. The Applicant has enclosed a Terminal Disclaimer and the required fee for filing, to remove this rejection.

The rejection of claims 1 and 2 under 35 U.S.C. §112 is believed overcome by the amendments to these claims.

Additionally, the Examiner rejected claims 1-3, 5-11, and 13-17 as being anticipated by the Hollerich patent, U.S. Patent No. 5,946,216. The Examiner correctly indicated that the patent included a picker, a bin, a disc tray and disc holders as well as a grasping mechanism. The picker arm moved perpendicular to the planar surface of the disc, and the Examiner then concluded that there was an interface to indicate the status in the system. As outlined in column 8, lines 31-43 of the Hollerich patent, it was stated in the specification that the interface must receive status signals from sensors able to indicate when the input tray is empty, when the reject station 60 is full and when the output tray 72 is full.

However, the claims of the present application are not concerned with the ordinary use of sensors for determining only when the input tray is empty or when the reject station is full, or when the output tray is full, but is directed toward a sensor that indicates when there is a disc in position on the picker, that is supported on the handler arm.

Claim 1 has been amended to indicate that there is a sensor that is carried by the picker arm for sensing the presence of a disc with the planar surface of the disc at a known position relative to the picker arm, or in other words, in a position where the picker can lift and retain the disc for movement. This is a spacing sensor,

between the disc and the arm to determine that there is a disc in position to be held, or that there is a disc being held when the arm is moved in its cycle of operation.

It is not a sensor that determines only whether bins are full or empty.

The Hollerich patent clearly does not use a sensor on the handler arm, the picker or any other component to sense the presence of a disc. In fact, the Hollerich patent states that no such sensor is necessary in column 3, line 56-64. There is a rotary sensor that is provided for monitoring movement of the elevator that moves the picker arm up and down in Hollerich, and then the specification states that it is an improvement because it simplifies the design reducing the cost and maintenance. The specification states "also, no other sensors are required to detect the presence of a disk, to prevent injury to the operator or to prevent damage to the components of the device or the disks." Hollerich has no sensors to detect the presence of a disc.

Movements of the elevator and the picker arm are sensed in the present invention, but in addition the Applicant has found that there is a benefit from detecting the presence of a disc at the picker and provides a sensor for doing that. The sensor senses the spacing between the handler or picker arm, which includes the picker itself, and the surface of a disc so that it can be determined physically when the picker is in a position to lift the disc, and whether or not there is a disc that is being carried. It also has the added benefit of being able to sense the top of the stack to determine stack height independently of any rotary sensor. A rotary sensor that senses movement of an arm elevator is not a direct spacing sensor between the handler arm or picker arm and the disc itself.

Thus, it is respectfully submitted that claim 1 and its dependent claim 3 and 5-8 are clearly allowable. Claim 9 is also believed allowable for the same reasons, and in particular claim 9

includes a sensor on the picker arm to sense the presence of a top disc of a storage bin with the top disc in position to be lifted by the disc picker. This is clearly a disc presence sensor, which is not used in the Hollerich patent.

Thus, it is respectfully believed that claims 9, 10 and 11 are likewise allowable.

Claim 13 includes the features of having a picker for picking a disc from a storage bin and the handler being movable from a position overlying the storage bin to a position overlying the tray, and a sensor "carried by the handler for sensing when the picker is holding a disc in position for movement between the storage bin and the tray" is recited. This again is clearly a sensor to detect the presence of a disc, which Hollerich says is not used, and is not needed in his arrangement.

Claim 13 is believed allowable, and dependent claim 14 likewise is allowable.

Independent method claim 15 relates a method of determining the number of discs that have been removed from the stack. A spacing between the handler and the top remaining disc in the stack is sensed. The position of a handler when it is the picker is in its sensed location is compared with a reference that indicates the correct height of the stack, which can be previously stored because of the thicknesses of the discs are known. The height of the handler when the top disc is sensed is known by tracking a stepper motor so that it can be compared with a reference. When the spacing relative to the top disc in the stack is signaled, if the comparison shows the handler should be at a higher level, it would mean that more than one disc had been picked in the previous cycle. These features not shown or suggested are in the Hollerich patent or the other art cited. This provides for the ability to precisely control the operation with which the handler is being used. Favorable action on claims 15 and 16 are thus respectfully requested.

Claim 17 is allowable for the same reason and claim a

method of error checking that uses a handler that has a picker that will lift a single disc, and comprises the steps of depositing a disc in a tray for the processing station, and then moving the handler back to overlies the stack of discs and again sensing the position of the height of the stack by sensing the spacing between the handler and a top disc in the stack. This is again detecting the presence of a disc relative to the handler and there is no such sensor taught or suggested in the Hollerich patent. Thus, it is respectfully requested that claim 17 if allowable.

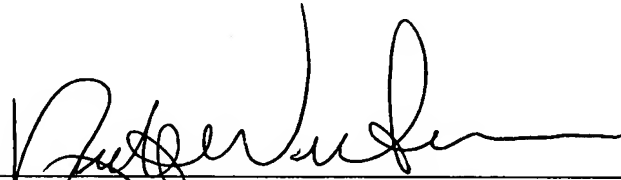
The indications are that claims 4, 12, and 18 and 19 were not rejected on the art, but these claims have not been re-written pending allowance of their parent claims.

Favorable action is respectfully requested.

The Director is authorized to charge any fee deficiency required by this paper or credit any overpayment to deposit account No. 23-1123.

Respectfully submitted,

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